Southern Nuclear

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Southern Nuclear Operating Company
Vogtle Electric Generating Plant Unit 4
ITAAC Closure Notification on Completion of ITAAC 2.1.03.13 [Index Number 88]

Ladies and Gentlemen:

In accordance with 10 CFR 52.99(c)(1), the purpose of this letter is to notify the Nuclear Regulatory Commission (NRC) of the completion of Vogtle Electric Generating Plant (VEGP) Unit 4 Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Item 2.1.03.13 [Index Number 88]. This ITAAC verified that the fuel assemblies and rod cluster control assemblies intended for the initial core load and listed in the COL Appendix C Table 2.1.3-1 have been designed and constructed in accordance with the principal design requirements. The closure process for this ITAAC is based on the guidance described in NEI 08-01, “Industry Guideline for the ITAAC Closure Process under 10 CFR Part 52” (Reference 1), which is endorsed by the NRC in Regulatory Guide 1.215.

This letter contains no new NRC regulatory commitments. Southern Nuclear Operating Company (SNC) requests NRC staff confirmation of this determination and publication of the required notice in the Federal Register per 10 CFR 52.99.

If there are any questions, please contact Kelli Roberts at 706-848-6991.

Respectfully submitted,

Jamie Coleman

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Regulatory Affairs Director Vogtle 3 & 4

Enclosure: Vogtle Electric Generating Plant (VEGP) Unit 4 ITAAC Closure Notification on Completion of 2.1.03.13 [Index Number 88]

JMC/MKO/sfr

cc: Regional Administrator, Region ll
Director, Office of Nuclear Reactor Regulation (NRR)
Director, Vogtle Project Office NRR
Senior Resident Inspector – Vogtle 3 & 4

Southern Nuclear Operating Company
ND- 23-0404
Enclosure

Vogtle Electric Generating Plant (VEGP) Unit 4
ITAAC Closure Notification on Completion of ITAAC 2.1.03.13 [Index Number 88]

ITAAC Statement

Design Commitment:

13. The fuel assemblies and rod cluster control assemblies intended for initial core load and listed in Table 2.1.3-1 have been designed and constructed in accordance with the established design requirements.

Inspections, Tests, Analyses:

An analysis is performed of the reactor core design.

Acceptance Criteria:

A report exists and concludes that the fuel assemblies and rod cluster control assemblies intended for the initial core load and listed in Table 2.1.3-1 have been designed and constructed in accordance with the principal design requirements.

ITAAC Determination Basis

Analyses of the reactor core design were performed to demonstrate that the fuel assemblies (FAs) and the rod cluster control assemblies (RCCAs) intended for the initial core load and listed in Combined License Appendix C (Reference 2) Table 2.1.3-1 (Attachment 1) were designed and constructed in accordance with the principal design requirements. The fuel and rod cluster control assembly's principal design requirements are identified in the Updated Final Safety Analysis Report (UFSAR, Reference 3) Section 4.1.1.

References 4 and 5 document the design closeout activities performed by Westinghouse to finalize the AP1000 fuel assembly design and the Rod Cluster Control Assembly (RCCA) design. These design closeout documents ensure that the Principal Design Requirements listed in the Updated Final Safety Analysis Report Chapter 4.1.1 are met. Following the completion of the design closeouts of References 4 and 5, additional changes were made to the AP1000 fuel assembly and RCCA designs. These changes were provided in Reference 6, the AP1000 Core Reference Report. References 7 and 8 were added as references in Section 4.1.1 of the UFSAR Revision 8.1. Together, these five documents, along with the associated UFSAR requirements, define the licensing basis for the Vogtle 3 & 4 fuel assembly and RCCA designs. References 4 through 8 were reviewed and it was confirmed that the NRC-approved fuel assembly and RCCA designs meet the UFSAR Chapter 4.1.1 Principal Design Requirements. Furthermore, references 4 through 8 document design compliance with the applicable UFSAR Chapter 4 requirements (including fuel damage and material compatibility principal design requirements).

Reference 9 documents the Initial Core Safety Analysis Checklist and is specific to the Vogtle 3 & 4 First Core design as documented in Reference 6. Reference 9 confirms that the initial core load safety analysis performed by Westinghouse for Cycle 1 meets the Principal Design Requirements listed in the UFSAR Chapter 4.1.1, and the applicable UFSAR Chapter 4 requirements.

Verification of the design and construction of fuel and RCCAs is documented in ITAAC Technical Report SV4-RXS-ITR-800088 (Reference 10). Construction of the fuel and RCCAs was performed in accordance with the Westinghouse Columbia Fuel Fabrication Facility Quality Management System (Reference 11). Construction of fuel assemblies was in accordance with NRFE-10-59, “DR

08-3, AP1000 Fuel Design Finalization Review Meeting" (Reference 4). Construction of RCCAs was in accordance with NRFE-11-29, "NRFE-11-29 - NG RCCA DESIGN CLOSEOUT PACKAGE Revision 2" (Reference 5). A letter was provided by Westinghouse (Reference 12) at the completion of the fabrication process attesting that the fuel assemblies and RCCAs for the Vogtle Unit 4 initial core load were constructed in accordance with the principal design requirements.

The reviews and technical reports described above demonstrate that the fuel assemblies and rod cluster control assemblies intended for the initial core load and listed in the COL Appendix C Table 2.1.3-1 have been designed and constructed in accordance with the principal design requirements.

References 4 through 10 are available for NRC inspection as part of the Unit 4 ITAAC 2.1.03.13 Completion Package (Reference 13).

ITAAC Finding Review

In accordance with plant procedures for ITAAC completion, Southern Nuclear Operating Company (SNC) performed a review of all ITAAC findings pertaining to the subject ITAAC and associated corrective actions. This review found that there are no relevant ITAAC findings associated with this ITAAC. The ITAAC completion review is documented in the ITAAC Completion Package for ITAAC 2.1.03.13 (Reference 13) and is available for NRC review.

ITAAC Completion Statement

Based on the above information, SNC hereby notifies the NRC that ITAAC 2.1.03.13 was performed for VEGP Unit 4 and that the prescribed acceptance criteria are met.

Systems, structures, and components verified as part of this ITAAC are being maintained in their as-designed, ITAAC compliant condition in accordance with approved plant programs and procedures.

References (available for NRC inspection)

1. NEI 08-01 Rev. 5 corrected 6-30-2014, Industry Guideline for the ITAAC Closure Process under 10 CFR Part 52
2. Unit 4 VEGP Combined License Appendix C, Amendment 191
3. VEGP UFSAR, Revision 11.2
4. NRFE-10-59 Rev. 0, DESIGN CLOSEOUT Package, "DR 08-3, AP1000 Fuel Design Finalization Review Meeting," as archived in Westinghouse PRIME document repository
5. NRFE-11-29 Rev. 2, "NRFE-11-29 - NG RCCA DESIGN CLOSEOUT PACKAGE Revision 2", as archived in Westinghouse PRIME document repository
6. APP-GW-GLR-153/WCAP-17524-P Rev. 1, AP1000 Core Reference Report, as archived in Westinghouse PRIME document repository
7. APP-GW-GLR-059/WCAP-16652-NP Rev. 0, AP1000 Core & Fuel Design Technical Report, as archived in Westinghouse PRIME document repository
8. WCAP-16943-NP Rev. 0, Enhanced GRCA Rodlet Design, as archived in Westinghouse PRIME document repository
9. APP-SSAR-F5-001, Rev. 1, AP1000 Safety Analysis Checklist, as archived in Westinghouse PRIME document repository

10. SV4-RXS-ITR-800088, Rev. 0, “ITAAC Technical Report, Unit 4 Verification of Fuel and RCCA Construction: ITAAC 2.1.03.13, NRC Index Number: 88”
11. Westinghouse Columbia Fuel Fabrication Facility Quality Management System, Rev. 8
12. NF-GP-23-038, from Westinghouse to SNC, “SOUTHERN NUCLEAR OPERATING COMPANY VOGTLE ELECTRIC GENERATING PLANT UNIT 4, Notification of Fabrication of Fuel and RCCAs,” 5/17/2023
13. 2.1.03.13-U4-CP-Rev0, ITAAC Completion Package

Attachment 1
*Excerpt Combined License Appendix C Table 2.1.3-1

***Equipment Name**	***Tag No.**	***ASME Code Section III Classification**	***Seismic Cat. I**
Fuel Assemblies (157 locations)	RXS-FA-A07/A08/A09/B05/B06/B07/B08/ B09/B10/B11/C04/C05/C06/C07/C08/C09/C10/ C11/C12/D03/D04/D05/D06/D07/D08/D09/ D10/D11/D12/D13/E02/E03/E04/E05/E06/E07/ E08/E09/E10/E11/E12/E13/E14/F02/F03/F04/ F05/F06/F07/F08/F09/F10/F11/F12/F13/F14/ G01/G02/G03/G04/G05/G06/G07/G08/G09/ G10/G11/G12/G13/G14/G15/H01/H02/H03/ H04/H05/H06/H07/H08/H09/H10/H11/H12/ H13/H14/H15/J01/J02/J03/J04/J05/J06/J07/J08/ J09/J10/J11/J12/J13/J14/J15/K02/K03/K04/ K05/K06/K07/K08/K09/K10/K11/K12/K13/ K14/L02/L03/L04/L05/L06/L07/L08/L09/L10/ L11/L12/L13/L14/M03/M04/M05/M06/M07/ M08/M09/M10/M11/M12/M13/N04/N05/N06/ N07/N08/N09/N10/N11/N12/P05/P06/P07/P08/ P09/P10/P11/ R07/R08/R09	No(1)	Yes
Rod Cluster Control Assemblies (RCCAs) (minimum 53 locations)	RXS-FR-B06/B10/C05/C07/C09/C11/D06/ D08/D10/E03/E05/E07/E09/E11/E13/F02/F04/ F12/F14/G03/G05/G07/G09/G11/G13/H04/ H08/H12/J03/J05/J07/J09/J11/J13/K02/K04/ K12/K14/L03/L05/L07/L09/L11/L13/M06/ M08/M10/N05/N07/N09/N11/P06/P10	No(1)	Yes

(1) Fuel assemblies are designed using ASME Section III as a general guide